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ABSTRACT

Using the research model developed by Caffrey and Isaacs for the American Council on Education, a study was conducted of the economic impact of New Jersey's community colleges to assist the sector in making an economic case for increased revenues. The formula used to determine the colleges' impact on the state involved totalling the in-county expenditures of the colleges, their employees, and their students, and multiplying the total by 2.5 to estimate the indirect impact of each dollar spent. The results of the study, in which 17 community colleges participated, included the following: (1) $54 million was spent by the colleges, $51 million by college employees, and $222 million by students in the state; (2) the total estimated economic impact on the state was an $822 million return on an initial state investment of $52 million in fiscal year 1982; and (3) the community colleges employed 6,205 people full-time and created another 21,000 full-time jobs in the state by virtue of their direct expenditures of over $300 million. The study report includes a rationale for conducting economic impact studies and recommendations for disseminating the study findings to policy makers. Appendices include charts illustrating the concept of economic impact, the operation of the multiplier, and the distribution of direct and indirect impacts of college spending. (HB)

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ED233754

A Study of the Economic Impact of the Community Colleges on the State of New Jersey

Research and Planning Committee
Council of County Colleges of New Jersey

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JC 830 300

March, 1983

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Brookdale Community College

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In particular, the director wants to thank the members of the Project Advisory Committee for their invaluable assistance and guidance: Gary Reddig of Gloucester; Donald Smith of Essex; Robert Sharpe of Morris; and Richard Parrish of Ocean.

Lastly, the director wants to thank three employees of Brookdale's Office of Research and Development that assisted in the preparation of this report: Cecilia Scovill; Ellen Reitman; and Mary Ann Smith.

INTRODUCTION

Mission and goal statements of community colleges have a common thread in that they invariably state that the primary purpose of community colleges is to provide postsecondary educational opportunities to the adult population of the colleges' sponsorship areas. The statements usually include listings of such valuable outcomes of learning as knowledge, creative capabilities, economic productivity and cultural enrichment.

As outcomes actually occur, community colleges may have substantial effects on the communities in which they are located. They may provide business and governments in the area with a well trained labor force. They may generate the technical expertise that is often required in modern times to perform required technical studies for local businesses or governments. They may also vastly broaden a community's cultural resources.

All of these outcomes are highly relevant in any attempt to measure the overall impact of a community college on the community in which it exists. A comprehensive study of all of these effects would be a monumental work entailing sociological, political, and historical analyses of both college and community. When completed, the study of these outcomes could not be presented in cold simple arithmetic terms showing costs and benefits on opposing sides of the ledger. The net contribution of the community college to its community would still be largely a matter of judgement.

The foregoing list of outcomes may be described accurately as long-term benefits because they add value to the community and because they are intangible. There are long-term money-related benefits as well, such as higher salaries, higher productivity, higher spending, and additional tax revenues. These outcomes, although difficult to measure, assist in the accomplishment of such community college missions as better social and economic climate and individual mobility and job security.

There are other outcomes of community colleges, usually not presented in the mission statement, that are more direct and more measurable, one of the most significant of which is that they bring revenue to their locality. Community colleges serve as substantial producers of jobs, as consumers of goods and services, as owners of property and as depositors and investors of cash resources that contribute to an expanding credit base.

The people who live in the area in which a college is located often think of the institution in terms of their own personal social interactions with its students. Merchants, landlords, bankers and other business persons may be sensitive to the students and college employees as sources of additional income for their business venture. However, the total economic relationship between the college and the community is not generally known.

The second set of outcomes presented above are more current and short-term, their benefits are measurable. Community colleges bring funds into the economy through several revenue sources: tuition and fees, local and state appropriations, private gifts, and federal

grants. The colleges circulate funds into the economy through expenditures: salary payments, purchases of goods and services, and capital construction. The ability to accurately measure, analyze, and present these economic outcomes is becoming an ever more important skill for a community college president, business officer, or research administrator.

Fundamental to this project was the theory that for each dollar spent for goods, services, and salaries by an institution or business, there will be many who benefit directly or indirectly from the original expenditure. For example, if a college buys equipment for a classroom, a salesman receives a commission; the manufacturer benefits; and, indirectly, the producers of iron, wood, plastics, and other materials used in the equipment realize a profit from the money spent for the finished product.

The benefits of additional money in the state are many and varied. In the case of a community college, the money paid as salaries may be spent locally for rent, mortgage payments, groceries, services, other goods or placed in savings. Although the general thought is that merchants and bankers are the beneficiaries, many others receive benefits also. The money deposited in both savings and checking accounts allows the bank to make more money available to people to finance homes, cars, and other large-cost items. Increased values and new properties increase the tax revenue and broaden the base for local government services.

The presence of the community college, in considering the total economic relationship with the surrounding community, also

results in some disadvantages. Fire protection, electricity, sewage disposal, and road maintenance are only a few of the services which may be necessary for the local government to provide. Additional people in an area create a need for new housing, but the additional children may create an added burden for the local schools.

Arguments by college officials about the successful production of outcomes by their colleges have often fallen on deaf ears in state legislative chambers. One possible tactic to deal with the appropriation problem is to set aside an examination of the social values of education for a more direct approach, a look strictly at an operating system's impact on the economy. If the system carries its own weight financially, if the return is at least as great as the investment the taxpayers make, positive value is evident. Colleges contribute to an increase in technical skills and income of students, with accompanying increases in spending in local businesses; colleges halp reduce costs to local businesses via the availability of a skilled labor force; the local economy is assisted by college and staff expenditures and bank deposits in local businesses; colleges provide local residents with cultural services at reduced costs; local business revenue is generated by college activities and programs; and property values are enhanced by the presence of the college.

The interaction of the economy and higher education has been in evidence since the early establishment of colleges and universities in the United States. In relatively recent years, there has been sharpened recognition and improved understanding of this interdependence.

Educators and economists have been measuring the economic impact of colleges for about twenty years. In essence, they have treated colleges and business enterprises, excluding the long-term educational benefits of existence and measuring the current direct economic contribution to the community. Community colleges have been the focus of much of this activity.

Economic impact studies are attempts to measure the circulation of college expenditures in the local economy. The studies measure employment, business volume, tax revenues, bank credit and personal income, and state and federal revenues. They also employ multipliers to more accurately measure cash flow.

An economic impact study enables a community college to improve its position with its funding sources. Community and college relations are documented. Political leaders are made aware of the tax burden eased and tax revenues generated. Faculty and staff become more aware of their contribution to the economy. Taxpayers see that their outlay does not just disappear and college administrators have a useful tool in making decisions about the future direction and priorities of their institutions.

Economic impact studies are of substantial value to administrators and faculty at community colleges because they provide comprehensive data for political purposes. Without them, endeavors to achieve greater local and state appropriations will be handicapped by the lack of tangible and reliable information on the measurable economic returns to be expected from the dollars invested in community colleges. The results of economic impact studies often are surprising

to the public and, indeed, to the academic community in terms of the prominent economic status of the college as an employer, consumer of goods and services, investor and property owner.

New Jersey Perspective

The community college picture in New Jersey mirrors that in the rest of the nation. Sector-wide enrollments continue to creep upward as public appropriations remain constant. State appropriations increased only five percent in FY1982 and not at all in FY1983. In fact, state appropriations per full time equivalent community college student have steadily decreased over the past five years because enrollments have surpassed the number funded by the State. The "budgeted" full time equivalent figure has remained almost constant for community colleges for many years while other sectors have made substantial gains.

The counties that sponsor community colleges are pushed to the limit by state and federal mandated programs. In addition, New Jersey has had a statutory five percent cap on annual increases in expenditures.

With the economy as unpredictable as it is today, and with the current negative attitude toward new taxes, community colleges will certainly not have as easy a time in the future with their county sponsors. Economic impact arguments will become more necessary.

New Jersey appears to be receptive to these economic impact arguments. New Jersey state and local governments are busy trying to improve tax structures, transportation systems and marketing approaches in attempts to keep the businesses they have while becoming more

attractive to new enterprises. Community college administrators need to formulate economic arguments in a more systematic manner.

THE PROJECT

In 1971, the American Council of Education published a research model with the expressed purpose of helping colleges and universities study the economic impact of a college's or university's expenditures on its community. This was the culmination of more than two years' work by two economists, John Caffrey and Herbert Isaacs. The model uses generally accepted economic principles and has received wide acceptance by colleges and universities throughout the United States.

The Research and Planning Committee of the Council of County Colleges of New Jersey, through a survey of research needs and priorities of top administrators in New Jersey community colleges, identified impact studies as the highest priority research need. As a result of this finding, the Research and Planning Committee commissioned G. Jeremiah Ryan of Brookdale Community College to direct an economic impact project.

The ACE model used twelve submodels to gather information and calculate the various kinds of economic impact. Since the model was developed for use by colleges and universities, it contained several areas which were not pertinent to two-year community colleges. One such submodel calculated the economic impact of student housing and fraternities and sororities. Because of the peculiarities of community colleges, it was impractical to use some of the submodels.

Therefore, the final model which was used accentuated the submodels most directly applicable to community colleges.

The goal of the project was to assist the New Jersey community colleges, and the community college sector as a whole, in making a clear economic case for increased county and state appropriations for operating budgets in upcoming fiscal years.

The project had an advisory committee that assisted in determining the scope and nature of the three proposed products. The members included the following individuals: Chairperson, Research and Planning Committee, Council of County Colleges; Special Assistant to the Council of County Colleges; Chairperson, County College Business Officers Association; and the Chairperson, Community College Association of Institutional Researchers. The committee communicated by telephone and mail.

As part of the project, the assistance of the following New Jersey organizations was solicited and received: the Research and Planning Committee, Economic Development Committee and Legislative Committee of the Council of County Colleges; the County College Business Officers Association; the Community College Association of Institutional Researchers; and the New Jersey County College Public Relations Council.

Brookdale Community College provided the following support to the project: director's time; secretarial time; typesetting and printing time and material; computer machine and personnel time; clerical time and materials; keypuncher time and materials; computer data analyst time; and telephone, postage and travel expenses.

Project Development and Implementation

An economic impact statement survey was developed. The elements of the survey were determined by a comprehensive literature review and consultation with the Project Advisory Committee. The survey was developed for use by each community college and was designed to help the college calculate its direct economic impact on its county. The survey was field tested at Brookdale and at Salem Community College and Passaic County Community College. Following testing, the survey was revised and distributed with guidelines for implementation to all of New Jersey Community Colleges. Appropriate college officials completed the survey and estimated the economic impact of their Colleges on their counties. The data generated by the application of the survey was used to estimate the economic impact of the community college sector on the State of New Jersey. The local data was supplemented with appropriate statewide information and economic indicators.

Project Formula

The following formula was used to determine the economic impact of the community colleges on the State of New Jersey:

Total in-county expenditures by the colleges
+
Total employee expenditures in-county X 2.5 (multiplier)
+
Total student expenditures in-county

Definitions of importance to the formula are:

Expenditures: Total in-county expenditures by the colleges included such items as supplies. Total employee expenditures would include food, housing and transportation. Total student expenditures include food, transportation, books and Student Government expenditures. The expenditures are a total of the goods and services purchased by employees, students and the college operating as a business in and by itself. All expenditures were to be in FY1982.

Multiplier: The multiplier was based upon the percent of each dollar spent in New Jersey that is then respent within the State in the successive rounds of spending. In this case, 2.5 has been chosen as a conservative estimate of the impact of the original amount of expenditures. In other words, the colleges create business within the State equal to two and one half times as much as is originally spent by the colleges, its employees and students. For example, for every $100,000 spent by the colleges, students and employees, $250,000 is being generated in local business activity. This ratio is 2.5:1 or a multiplier of 2.5.

Project Limitations

The primary purpose of this project was to produce economic impact statements at the local and statewide level for community colleges in New Jersey. Despite the advantages stemming from the development and application of an economic impact model and the production of economic impact statements, the project had the following limitations.

1. The model developed employed a linear cash flow formula that includes only what can be easily measured. More difficult and time consuming measures will be excluded.

2. The economic impact statements were inherently limited because they did not measure the colleges' effect on the quality of life in their communities.

3. The model developed, similar to models developed before it, provided built-in understatement by using conservative calculation procedures.

4. The model produced an estimation of annual impact, a very short term measure.

THE RESULTS

Seventeen of New Jersey's community colleges participated in the project. The combined economic impact of the sector on the State of New Jersey is detailed as follows:

Total New Jersey expenditures by the colleges	$ 54,813,718.00
Total employee expenditures in New Jersey	51,691,526.00
Total student expenditures in New Jersey	222,316,699.00
Total initial economic impact of the colleges on the County	328,821,943.00
Multiplier recommended by Caffrey and Isaacs	2.5
Total Estimated Economic Impact	$822,054,857.50

The State of New Jersey received an estimated economic impact of $822 million on an initial investment of $52 million in Fiscal Year 1982. The return of 15 to 1 is similar to the impacts estimated by studies of community college systems in Virginia, Maryland, Washington, Illinois and Michigan.

In terms of employment, the community colleges employed 6,205 people on a full-time basis and, by virtue of their direct expenditures of over $300 million, created another 21,000 full-time jobs in New Jersey.

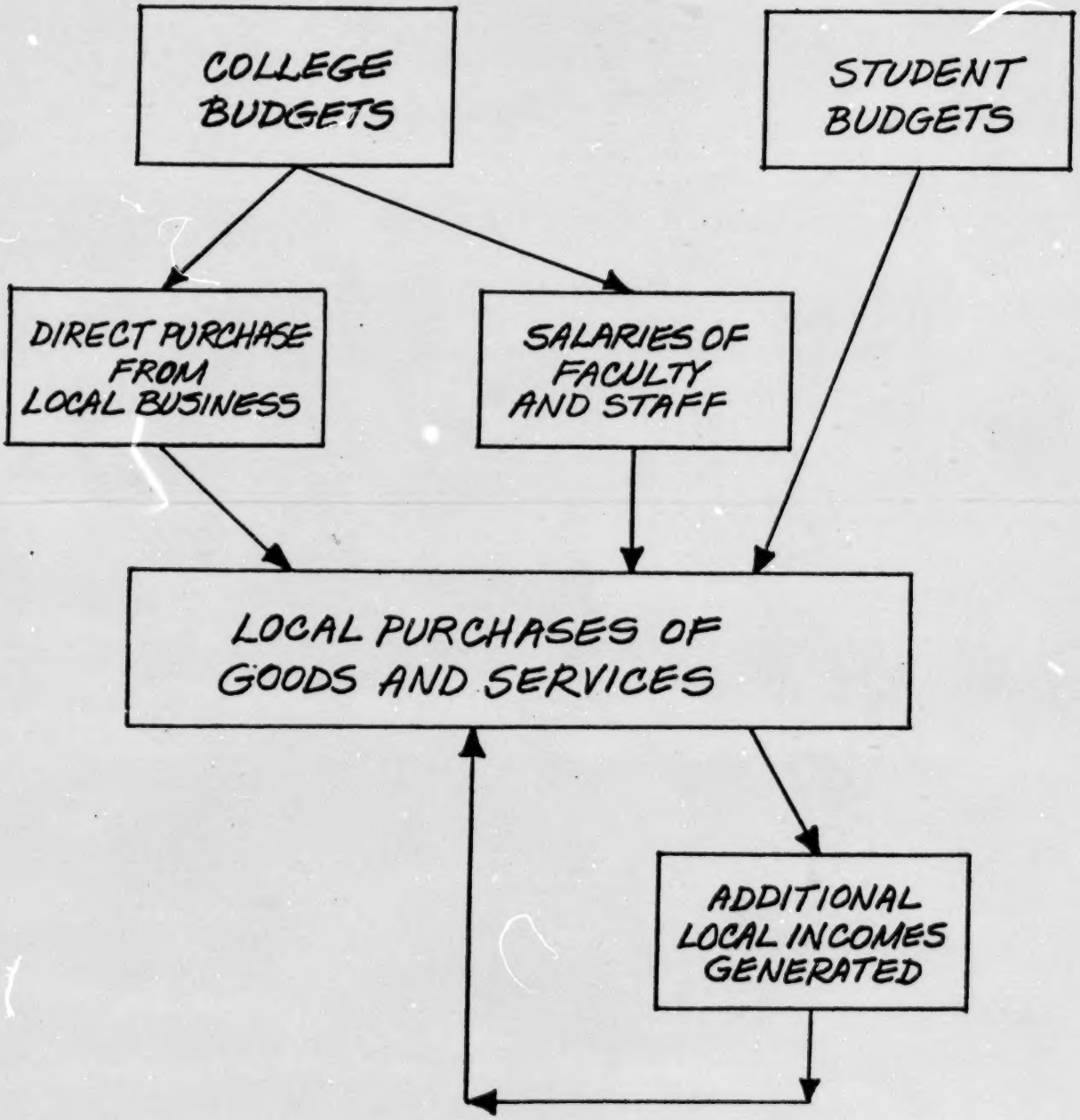
The estimated impacts of each of the seventeen community colleges that participated in the study are detailed in a chart that appears at the rear of this report. The economic impacts of colleges on their state are varied and complex, and the interpretation of the impacts as revealed by this study should receive careful consideration. The estimates based on this study are conservative. The model, developed for the expressed purpose of measuring economic impact of colleges and universities, has been tested and validated by use in earlier research. In this study the researcher also used the most cautious figures in calculating the impacts.

RECOMMENDATIONS

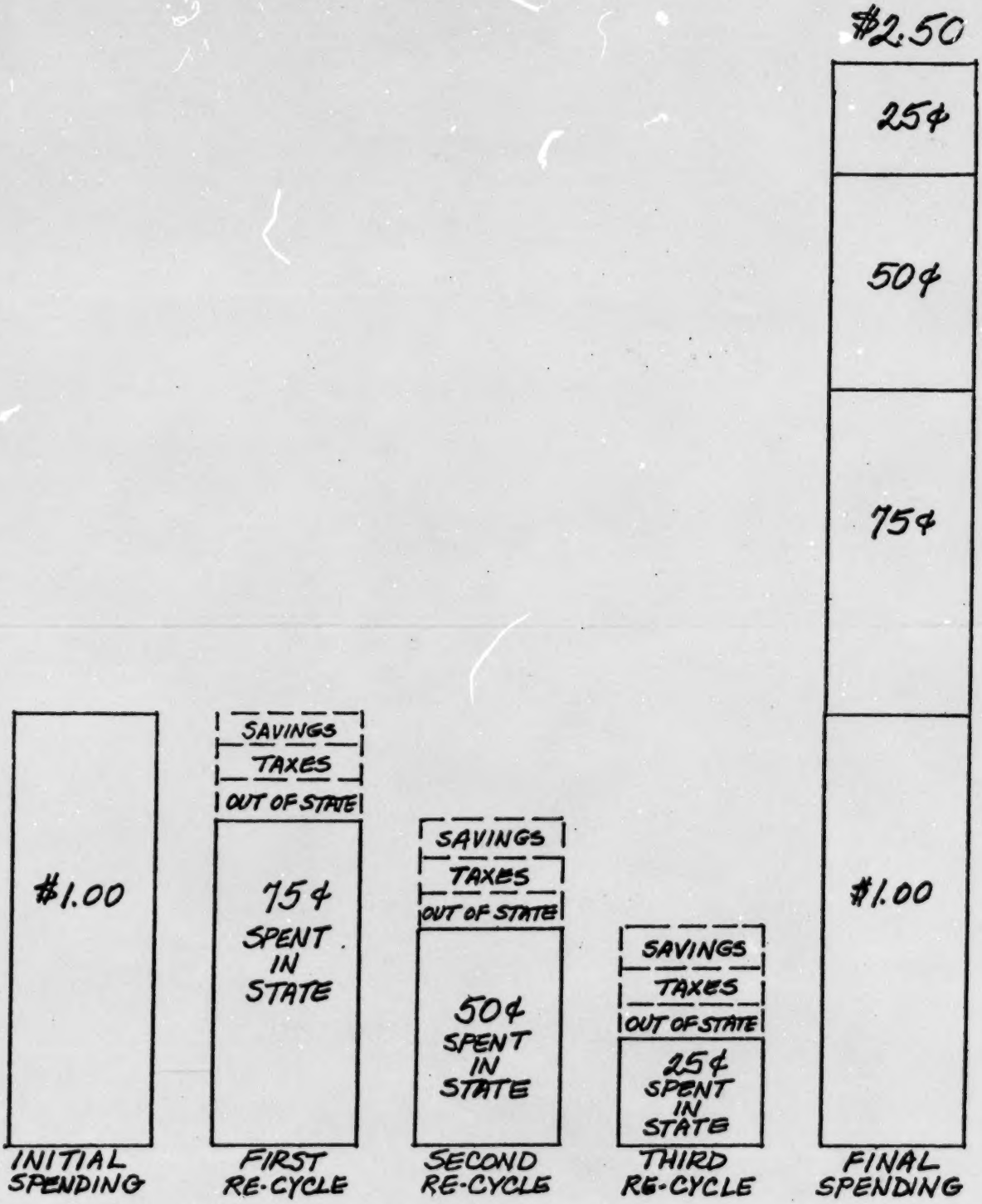
. The estimated economic impact of New Jersey's community colleges is a potentially very useful piece of information. It is recommended that the estimate by utilized as follows:

1. The economic impact should be mentioned, if not highlighted, in the proposed sector wide publicity brochure.
2. The economic impact should be included in the sector's testimony to the State Legislature's joint appropriations committee regarding the FY1984 appropriations.
3. The economic impact should be mentioned in conversations with the Governor, the Governor's staff and other appropriate executive branch officials.
4. Press releases regarding the economic impact should be prepared and distributed to the major daily newspapers of New Jersey, New York City and Philadelphia.
5. A summary of this report should be prepared and sent to New Jersey's major business and trade associations and labor unions.
6. A summary of this report should also be shared with AACJC, ACCT, and The Chronicle of Higher Education.

7. The economic impact of New Jersey's community colleges should continue to be calculated at intervals as frequent as every other year.
8. Although the estimated impact of each institution is available, and detailed in a chart contained in this report, each institution should be kept anonymous when the report is condensed and shared with public officials. Differences in impact might be misunderstood by individuals unfamiliar with the intent of the project.
9. The Association of County Community College Presidents, Legislative Committees of the Council, and the entire Council of County Colleges should be briefed on the results of the project.

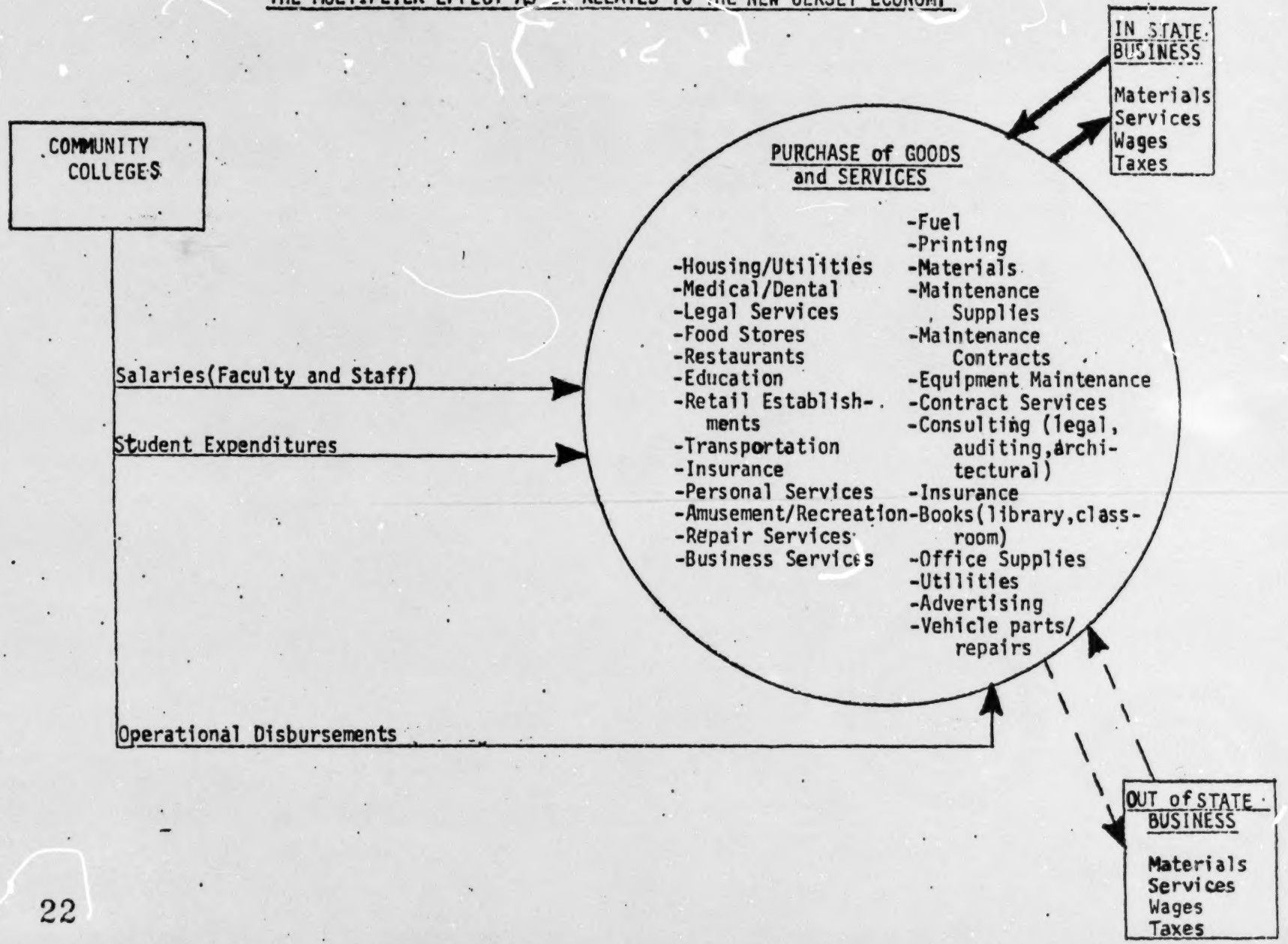

COLLEGE BUDGETS
STUDENT BUDGETS
DIRECT PURCHASE FROM LOCAL BUSINESS
SALARIES OF FACULTY AND STAFF
LOCAL PURCHASES OF GOODS AND SERVICES
ADDITIONAL LOCAL INCOMES GENERATED

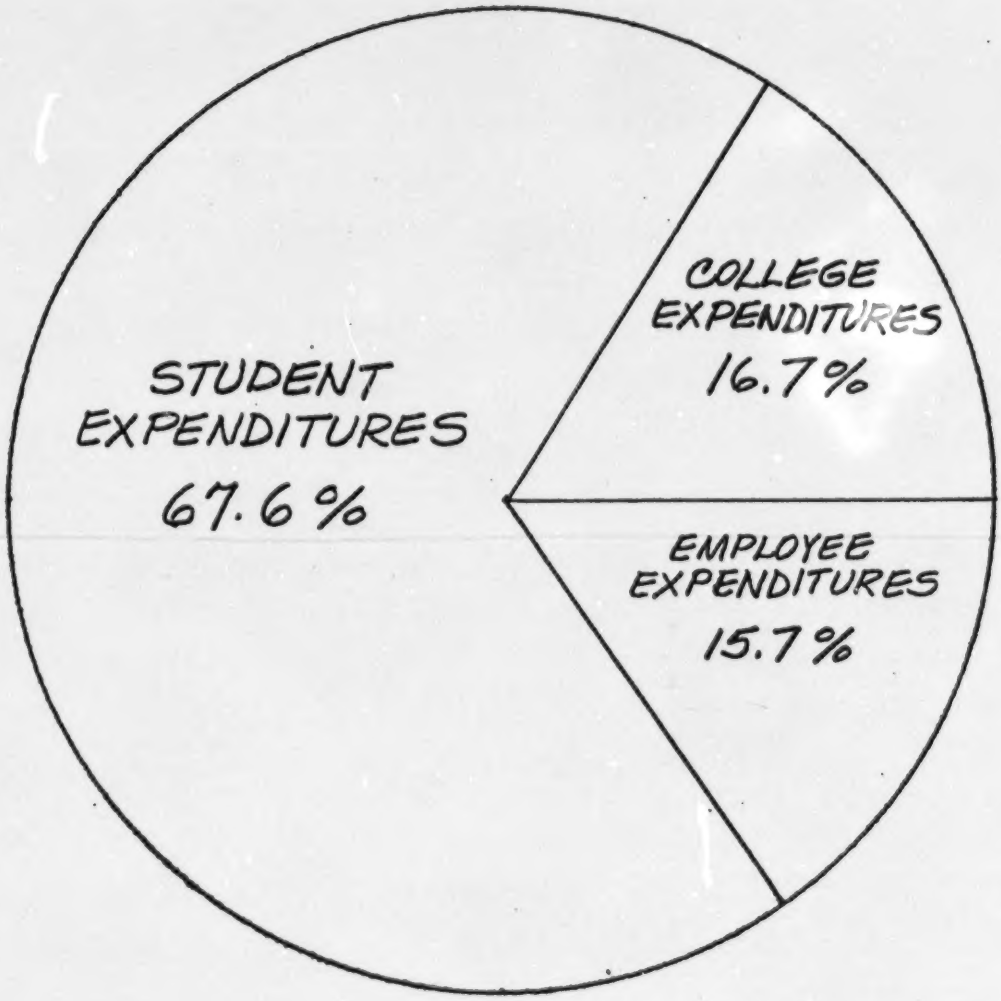
How Economic Impact Works



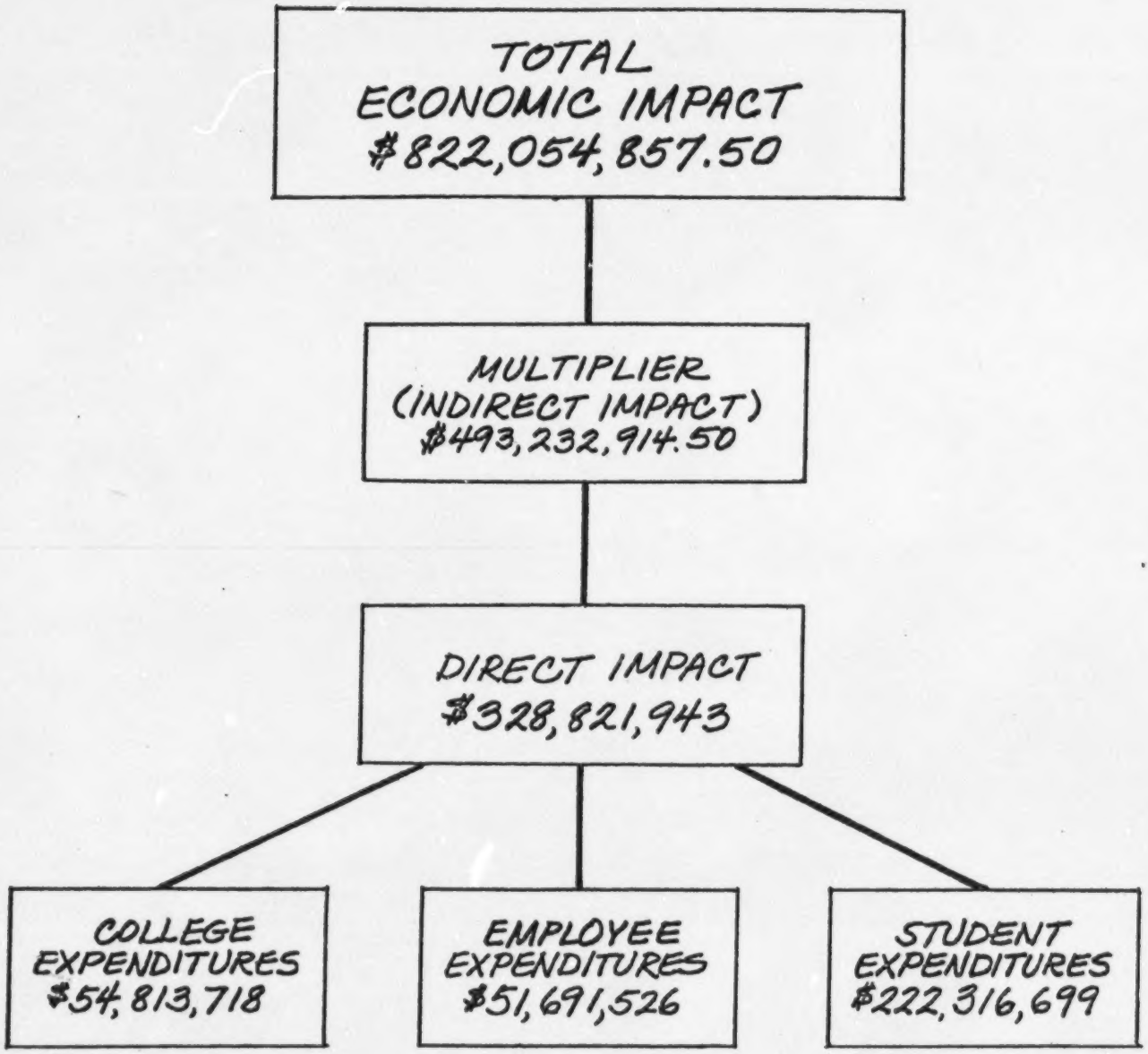
How the Multiplier Works

THE MULTIPLIER EFFECT AS IT RELATES TO THE NEW JERSEY ECONOMY





Percentage Distribution of
Direct Impact of Community College
Spending on New Jersey



Total Economic Impact
of the Community College
on New Jersey

DIRECT ECONOMIC IMPACT OF NEW JERSEY COMMUNITY COLLEGES

Colleges	College Expenditures in New Jersey	Employee Expenditures in New Jersey	Total College and Employee Expenditures	Student Expenditures in New Jersey	Total Direct Expenditures
Atlantic	8,452,772	2,350,547	10,803,319	8,038,472	18,841,791
Bergen	2,983,133	5,119,202	8,102,335	27,245,990	35,348,325
Brookdale	5,566,028	4,127,062	9,693,090	27,681,850	37,374,940
Burlington	2,476,504	3,136,123	5,612,627	7,206,342	12,818,969
Camden	2,507,375	2,881,618	5,388,993	7,197,600	12,586,593
Cumberland	1,183,436	1,076,030	2,259,466	3,361,800	5,621,266
Essex	4,137,394	4,821,792	8,959,186	20,349,000	29,308,186
Gloucester	1,062,467	1,438,821	2,501,288	10,066,100	12,567,388
Hudson	4,919,822	1,197,349	6,117,171	5,416,750	11,533,921
Mercer	1,990,020	3,566,807	5,556,827	23,343,900	28,900,727
Middlesex	3,120,000	5,849,618	8,969,618	20,918,450	29,888,068
Morris	2,050,000	5,981,458	8,031,458	22,608,190	30,099,648
Ocean	4,391,282	2,465,746	6,857,028	9,566,900	16,423,928
Passaic	1,609,088	1,765,593	3,374,681	5,140,800	8,515,481
Salem	542,368	502,970	1,045,338	2,307,270	3,352,608
Somerset	3,574,000	1,877,538	5,451,538	7,768,000	13,219,538
Union	3,379,630	2,570,860	5,950,490	10,616,455	16,566,945
Union CTI	868,399	962,392	1,830,791	3,482,830	5,313,621
	54,813,718	51,691,526	106,505,244	222,316,699	328,821,942

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